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**Abstract**

A method of production of metal carboxylates and of their metal carboxylate-aminoate or metal carboxylate-methioninate hydroxy analog derivatives, and their use as growth promoters in animal nutrition.

It comprises mixing stoichiometric quantities of formic or butyric acid and oxide and of the dry basic salt of divalent metal, the oxide or hydroxide of  $\text{Zn}^{2+}$  or  $\text{Cu}^{2+}$ , to give an exothermic reaction, without addition of solvents, giving rise to a dry carboxylate of divalent metal that is easy to use. It also describes the use of a stage of mixing with metal aminoates or hydroxy analogs of methionine in the process, for forming either a carboxylate-aminoate of divalent metal or a carboxylate-methioninate hydroxy analog of divalent metal, products that are finally obtained in a dry form that is easy to use.

Finally it describes the use of the compounds that can be obtained in the feeding of monogastric animals for improving the productivity, the bioavailability of the metals, and achieve a reduction of their emission to the environment, owing to the growth-promoting effect that they all display.